

290673US0PCT.ST25
SEQUENCE LISTING

<110> Sugiyama, Haruo
<120> HLA-DR-BINDING ANTIGEN PEPTIDE DERIVED FROM WT1
<130> 290673US0PCT
<140> US 10/578,183
<141> 2006-05-04
<150> PCT/JP04/016336
<151> 2004-11-04
<150> JP 2003-375603
<151> 2003-11-05
<160> 56
<170> PatentIn version 3.3
<210> 1
<211> 449
<212> PRT
<213> Homo sapiens
<400> 1

Met Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Pro
1 5 10 15

Ser Leu Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala
20 25 30

Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr
35 40 45

Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro Pro
50 55 60

Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly
65 70 75 80

Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe
85 90 95

Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe
100 105 110

Gly Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe
115 120 125

Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile
130 135 140

Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr
145 150 155 160

290673US0PCT.ST25

Gly His Thr Pro Ser His His Ala Ala Gln Phe Pro Asn His Ser Phe
165 170 175

Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser Leu Gly Glu Gln Gln
180 185 190

Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His Thr Pro Thr Asp Ser
195 200 205

Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr Pro Tyr Ser Ser Asp
210 215 220

Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln
225 230 235 240

Met Asn Leu Gly Ala Thr Leu Lys Gly Val Ala Ala Gly Ser Ser Ser
245 250 255

Ser Val Lys Trp Thr Glu Gly Gln Ser Asn His Ser Thr Gly Tyr Glu
260 265 270

Ser Asp Asn His Thr Thr Pro Ile Leu Cys Gly Ala Gln Tyr Arg Ile
275 280 285

His Thr His Gly Val Phe Arg Gly Ile Gln Asp Val Arg Arg Val Pro
290 295 300

Gly Val Ala Pro Thr Leu Val Arg Ser Ala Ser Glu Thr Ser Glu Lys
305 310 315 320

Arg Pro Phe Met Cys Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe Lys
325 330 335

Leu Ser His Leu Gln Met His Ser Arg Lys His Thr Gly Glu Lys Pro
340 345 350

Tyr Gln Cys Asp Phe Lys Asp Cys Glu Arg Arg Phe Ser Arg Ser Asp
355 360 365

Gln Leu Lys Arg His Gln Arg Arg His Thr Gly Val Lys Pro Phe Gln
370 375 380

Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
385 390 395 400

His Thr Arg Thr His Thr Gly Lys Thr Ser Glu Lys Pro Phe Ser Cys
405 410 415

Arg Trp Pro Ser Cys Gln Lys Lys Phe Ala Arg Ser Asp Glu Leu Val
420 425 430

290673US0PCT.ST25
Arg His His Asn Met His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala
435 440 445

Leu

<210> 2
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 2

Leu Val Arg His His Asn Met His Gln
1 5

<210> 3
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 3

Leu Tyr Gln Met Thr Ser Gln Leu Glu
1 5

<210> 4
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 4

Phe Lys His Glu Asp Pro Met Gly Gln
1 5

<210> 5
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 5

Leu Val Arg Ser Ala Ser Glu Thr Ser
1 5

<210> 6
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 6

Met Gly Gln Gln Gly Ser Leu Gly Glu
1 5

<210> 7
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 7

Val Tyr Gly Cys His Thr Pro Thr Asp
1 5

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 8

Leu Arg Thr Pro Tyr Ser Ser Asp Asn
1 5

<210> 9
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 9

Phe Ile Lys Gln Glu Pro Ser Trp Gly
1 5

<210> 10
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 10

Trp Gly Gly Ala Glu Pro His Glu Glu
1 5

<210> 11
<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 11

Phe Lys Leu Ser His Leu Gln Met His
1 5

<210> 12

<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 12

Tyr Phe Lys Leu Ser His Leu Gln Met
1 5

<210> 13

<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 13

Leu Glu Cys Met Thr Trp Asn Gln Met
1 5

<210> 14

<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 14

Phe Arg Gly Ile Gln Asp Val Arg Arg
1 5

<210> 15

<211> 9

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 15

Leu Leu Pro Ala Val Pro Ser Leu Gly
1 5

<210> 16
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 16

Leu Ser Ala Phe Thr Val His Phe Ser
1 5

<210> 17
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 17

Met Asn Leu Gly Ala Thr Leu Lys Gly
1 5

<210> 18
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 18

Val Arg Ser Ala Ser Glu Thr Ser Glu
1 5

<210> 19
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 19

Leu Pro Ala Val Pro Ser Leu Gly Gly
1 5

<210> 20
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 20

Tyr Gly Cys His Thr Pro Thr Asp Ser
1 5

<210> 21
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 21

Phe Ser Gly Gln Phe Thr Gly Thr Ala
1 5

<210> 22
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 22

Phe Met Cys Ala Tyr Pro Gly Cys Asn
1 5

<210> 23
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 23

Tyr Gln Met Thr Ser Gln Leu Glu Cys
1 5

<210> 24
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 24

Lys Arg Tyr Phe Lys Leu Ser His Leu Gln Met His Ser Arg Lys His
1 5 10 15

<210> 25
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 25

290673US0PCT.ST25
Pro Asn His Ser Phe Lys His Glu Asp Pro Met Gly Gln Gln Gly
1 5 10 15

<210> 26
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 26

Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met Thr Trp Asn Gln
1 5 10 15

Met Asn Leu

<210> 27
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 27

Cys Met Thr Trp Asn Gln Met Asn Leu
1 5

<210> 28
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 28

Cys Tyr Thr Trp Asn Gln Met Asn Leu
1 5

<210> 29
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 29

Arg Met Phe Pro Asn Ala Pro Tyr Leu
1 5

<210> 30
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 30

Arg Tyr Pro Ser Cys Gln Lys Lys Phe
1 5

<210> 31
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide
<400> 31

Ala Tyr Thr Trp Asn Gln Met Asn Leu
1 5

<210> 32
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide
<400> 32

Ala Tyr Thr Trp Asn Gln Met Asn Leu
1 5

<210> 33
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa = Abu

<220>
<221> MISC_FEATURE
<222> (1)..(1)
<223> Xaa is Abu

<400> 33

Xaa Tyr Thr Trp Asn Gln Met Asn Leu
1 5

<210> 34
<211> 9
<212> PRT
<213> Artificial Sequence

290673US0PCT.ST25

<220>
<223> Synthetic Peptide

<400> 34

Arg Tyr Thr Trp Asn Gln Met Asn Leu
1 5

<210> 35
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 35

Lys Tyr Thr Trp Asn Gln Met Asn Leu
1 5

<210> 36
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 36

Arg Tyr Phe Pro Asn Ala Pro Tyr Leu
1 5

<210> 37
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 37

Arg Tyr Pro Gly Val Val Pro Thr Leu
1 5

<210> 38
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 38

Ala Tyr Leu Pro Ala Val Pro Ser Leu
1 5

<210> 39
<211> 9
<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 39

Asn Tyr Met Asn Leu Gly Ala Thr Leu
1 5

<210> 40

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 40

Arg Val Pro Gly Val Ala Pro Thr Leu
1 5

<210> 41

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 41

Arg Tyr Pro Ser Ser Gln Lys Lys Phe
1 5

<210> 42

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 42

Arg Tyr Pro Ser Ala Gln Lys Lys Phe
1 5

<210> 43

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<220>

<221> MISC_FEATURE

<222> (5)..(5)

<223> Xaa = Abu

<220>

290673US0PCT.ST25

<221> MISC_FEATURE

<222> (5)..(5)

<223> Xaa is Abu

<400> 43

Arg Tyr Pro Ser xaa Gln Lys Lys Phe
1 5

<210> 44

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 44

Ser Leu Gly Glu Gln Gln Tyr Ser Val
1 5

<210> 45

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 45

Asp Leu Asn Ala Leu Leu Pro Ala Val
1 5

<210> 46

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 46

Tyr Arg Ile His Thr His Gly Val Phe
1 5

<210> 47

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Peptide

<400> 47

Leu Val Arg His His Asn Met His Gln
1 5

<210> 48

<211> 9

290673US0PCT.ST25

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 48

Tyr Gln Met Thr Ser Gln Leu Gly Cys
1 5

<210> 49
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 49

Leu Gln Met His Ser Arg Lys His Thr
1 5

<210> 50
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 50

Tyr Phe Lys Leu Ser His Leu Gln Met
1 5

<210> 51
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 51

Val Lys Pro Phe Gln Cys Lys Thr Cys
1 5

<210> 52
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 52

Leu Lys Arg His Gln Arg Arg His Thr
1 5

290673US0PCT.ST25

<210> 53
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 53

Leu Lys Thr His Thr Arg Thr His Thr
1 5

<210> 54
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 54

Tyr Gly Pro Phe Gly Pro Pro Pro Pro
1 5

<210> 55
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 55

Val Arg His His Asn Met His Gln Arg
1 5

<210> 56
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Peptide

<400> 56

Phe Pro Asn Ala Pro Tyr Leu Pro Ser
1 5